REMARKS

This is in response to the Final Office Action mailed March 5, 2004, in which the Examiner rejected claims 1, 2, 4, 5, 7, 8, 10, 11, 17, 18, 20, 22 and 23. Reconsideration of the application as amended is respectfully requested.

Drawing Objections

In Section 1 of the Office Action, the Examiner objected to FIGS. 4 and 5, but provided no indication as to the authority for the rejections. Even so, Applicant has submitted proposed corrections to FIGS. 4 and 5 that include the requested elements in an effort to expedite the prosecution of the present application. Should the Examiner still find grounds to object to the drawings, Applicant requests that the Examiner specify with particularity the authority (e.g., 37 C.F.R. §1.81, 1.83 or 1.84), on which the rejections are based.

Rejections Under §112, First Paragraph

In Section 2 of the Office Action, the Examiner rejected claims 1, 2, 4, 5, 7, 8, 10, 11, 17, 18, 20, 22 and 23 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In general, the Examiner found the claims to contain subject matter that was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. Applicant respectfully traverses the rejection since the Examiner has failed to establish a reasonable basis for questioning the enablement of the present application.

Applicant submits that the claims are directed to perpendicular writing elements, that are described in such a manner as to allow one skilled in the art to practice the claimed invention without undue experimentation. In particular, Applicant has explained the structure of the claimed writing elements of the

present invention with respect to FIGS. 4 and 6. Additionally, the specification, as amended, explains on page 10 that the writing element 180

> operates with a perpendicular recording medium, such as a disc 132, having a hard recording layer 160 overlaying a soft magnetic layer 158 to perform the desired perpendicular recording. Magnetic signals generated by conductive coil 186 directs the orientation of magnetization vectors 198 in a desired direction. Soft magnetic layer 158 operates to further assist in the orientation of magnetization vectors 198 in the desired direction and to orient the magnetic moments 162 of hard recording layer 160.

The longitudinal writing element 182 of the present application is similarly disclosed.

Applicant submits that the Examiner must presume that the specification complies with the enablement provisions of §112, first paragraph, "unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." In the Office Action, the Examiner appears to doubt the truthfulness of Applicant's contention that the claimed writing element is capable of performing perpendicular recordings as disclosed. As stated by the court:

> "it is incumbent upon the Patent Office, whenever a rejection on this [§112, first paragraph] is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure or to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively active disclosure." *In re Marzocchi*, 439 F2d 220, 224, 169 USPQ 367, 370 (CCPA 1971).

Rather than explaining why Applicant's contention of the operability of the claimed write element is inaccurate or incorrect and providing evidence supporting such an assertion, the

Examiner has based the rejections on a finding of a need to depict additional flux lines in order to more thoroughly describe the operability of the claimed write element. In general, the Examiner fails to assert that the claimed write element will not operate as described.

For example, the Examiner wonders where the flux goes and "how is flux prevented from interacting with the MR element shields in such a manner that one or both shields act as a return path?" Applicant believes that there may be some misunderstanding of the term "conducted". In order to have a return path that "conducts" the magnetic signals to the writing pole at the back gap region, a link of magnetically conductive material (i.e., a return pole) must be attached to the writing pole at the back gap region where the magnetic signals can be returned to the writing pole. An example of such a return pole is shown in FIGS. 2 and 3 as return pole 140, which, as best shown in FIG. 2, is attached to the writing pole 144 at the back gap by a back gap via 148.

As claimed and clearly provided with reference to FIGS. 4 and 5 and explained in the corresponding written description, the writing elements 180 and 182 of the present invention lack such a magnetically conductive return path. Instead, writing pole 184 is insulated from such connections by insulating material 188. Accordingly, the shields 222 and 224 of the read element 220 of the present invention cannot act as a magnetically conductive return path to the writing pole 184 at the back gap region 194 since they are not connected to the writing pole 184 by a link of magnetically conductive material.

Applicant submits that, in order to establish a reasonable basis for questioning the enablement of the present application, the Examiner must at least provide some support for the assertion that those skilled in the art who have more than a basic understanding of principles of magnetism; perpendicular recording methods, mediums, and writing elements; and longitudinal recording

methods, mediums, and writing elements; would find it necessary to view exemplary lines of magnetic flux by the writing element of the present invention in order to understand how it operates. Therefore, Applicant requests that the rejections be withdrawn.

Although Applicant respectfully believes that the rejections are improper since the Examiner has failed to establish a reasonable basis for questioning the enablement of the present application, Applicant has provided herewith proposed drawing corrections to FIGS. 4 and 5 to provide the requested flux lines and a corresponding replacement sheet, in an effort to expedite the prosecution of the present application. Additionally, amendments to the specification have been made to explain the newly depicted elements in the drawings.

Rejections Under 35 U.S.C. §102(b)

In Section 4 of the Office Action, the Examiner rejected claims 1, 4, 5, 7, 10, 11, 17, 18, 22 and 23 under 35 U.S.C. §102(b) as being anticipated by Tanaka et al. (U.S. Patent No. 6,128,166). Applicant respectfully disagrees with the Examiner's assessment of the cited reference.

In particular, FIG. 7 of Tanaka et al. fail to provide any disclosure that "the magnetic signals are not conducted to the writing pole [or perpendicular writing means] at the back gap region through a return pole element", as described in independent claims 1, 7 and 17. Additionally, FIG. 7 is a simplified cross-sectional view of the system of Tanaka et al. and, therefore, does not depict the entire structure of the system. Accordingly, it can not be known whether a return pole element that operates to conduct magnetic signals to the write pole 26 at the back gap region does not exist in the magnetic recording/reproducing system of FIG. 7. Applicant submits that it would be more reasonable to assume that such a return pole element exists in the recording/reproducing system of Tanaka et al. that it would to

assume that one does not.

FIG. 7 of Tanaka et al. is an illustration of the recording/reproducing system, which is provided to a relationship between a recording track width (Tw) of the recording head, a reproduction track width Tr of the reproducing head, a gap length (g), and a pitch (Tp) of the recording tracks of the recording medium. The illustration of FIG. 7 is highly simplified as evidenced by the fact that the illustration fails to show the multiple layers forming the reproducing MR element 24, the required electrical connections to the recording magnetic pole film 26, the required electrical connections to the reproducing MR element 24, and other elements.

Applicant submits that, in accordance with the Examiner's rationale for the rejections, the failure to depict such elements constitutes enabling disclosure of what would likely be a novel reproducing MR element and novel methods of transmitting and receiving signals by the reproducing MR element and the recording magnetic pole film. Applicant submits that such an interpretation is improper. Rather, disclosure of unconventional practices can not be disclosed in an enabling manner by such simplified illustrations without support for such unconventional practices in the written description.

Tanaka et al. provide no discussion regarding whether the recording magnetic pole film 26 lacks a return pole element that conducts magnetic signals to the film 26 at a back gap region. Applicant submits that the sole reliance on the highly simplified illustration of FIG. 7 as providing enabling disclosure that the system of Tanaka et al. does not include such a return pole element is improper. First, it can not be known whether a different cross section of the system of Tanaka et al. would not reveal a return pole element. Second, because the lack of a return pole element would constitute such a significant departure from conventional writing elements, those skilled in the art would

simply assume that the return pole element exists even though it is not shown. Accordingly, in order to be enabling, Tanaka et al. must provide some discussion regarding the lack of a return pole element. However, no such discussion is provided. Therefore, Applicant submits that it is more reasonable to assume that such a return pole element exists in the system of Tanaka et al., than it is to assume that it does not. As a result, Applicant submits that Tanaka et al. fail to provide enabling disclosure of the write elements of the rejected claims.

Therefore, Applicant submits that claims 1, 4, 5, 7, 10, 11, 17, 18, 22 and 23 are not anticipated by Tanaka et al., and requests that the rejections be withdrawn.

Rejections Under 35 U.S.C. §103(a)

In Section 6 of the Office Action, the Examiner rejected claims 2, 8 and 20 under 35 U.S.C. §103(a) as being unpatentable over Tanaka et al. in view of Cohen et al. (U.S. Patent NO. 5,703,740). The Examiner identified Tanaka et al. as failing to disclose a helical coil arrangement, but found such a coil arrangement to be disclosed in Cohen et al. The Examiner found that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the coil of Tanaka et al. take on a helical arrangement. Additionally, the Examiner found that one would have been motivated to make such an adjustment to Tanaka et al. in order to "provide an increased number of turns and to increase efficiency."

Applicant respectfully disagrees with the Examiner's assessment of the cited references. In particular, Applicant disagrees with the Examiner's finding of a motivation or suggestion to combine the references. The Federal Circuit has stated, "virtually all [inventions] are combinations of old elements." Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983). The Federal Circuit

has also found that rejecting patents solely by finding prior art corollaries for the claimed elements would permit an Examiner to use a claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention, which would be "an illogical and inappropriate process by which to determine patentability." Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996). Accordingly, even seemingly simple changes require a finding of a suggestion in the prior art to make the modification to avoid the improper use of hindsight. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Tanaka et al. fail to provide any suggestion of a need for the helical coil arrangement of Cohen et al. or one having an increased number of turns or increased efficiency. Likewise, Cohen et al. fail to provide any suggestion of using the disclosed helical coil arrangement with a writing element that lacks a return pole element. Additionally, there is no evidence that the coil arrangement of Cohen et al. would result in an improvement over that disclosed in Tanaka et al. As a result, the Examiner must rely upon an Applicant's disclosure to provide the suggestion or motivation for the combination and to discern the "obviousness" of the present invention. Such use of hindsight is improper. *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002)("It is improper, in determining whether a person of ordinary skill in the art would have been led to this combination of references, simply to '[use] that which the inventor taught against its teacher.'")(quoting *W.L. Gore v. Garlock, Inc.*, 220 USPQ 303, 312-13 (Fed. Cir. 1983)).

Accordingly, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness against claims 2, 8 and 20, and request that the rejections be withdrawn. Additionally, Applicant submits that claims 2, 8 and 20 are allowable as being dependent from base claims 1, 7 and 17,

respectively, which are believed to be allowable for the reasons discussed above.

Conclusion

In view of the above comments and remarks, it is believed that the present application is in condition for allowance. Consideration and favorable action is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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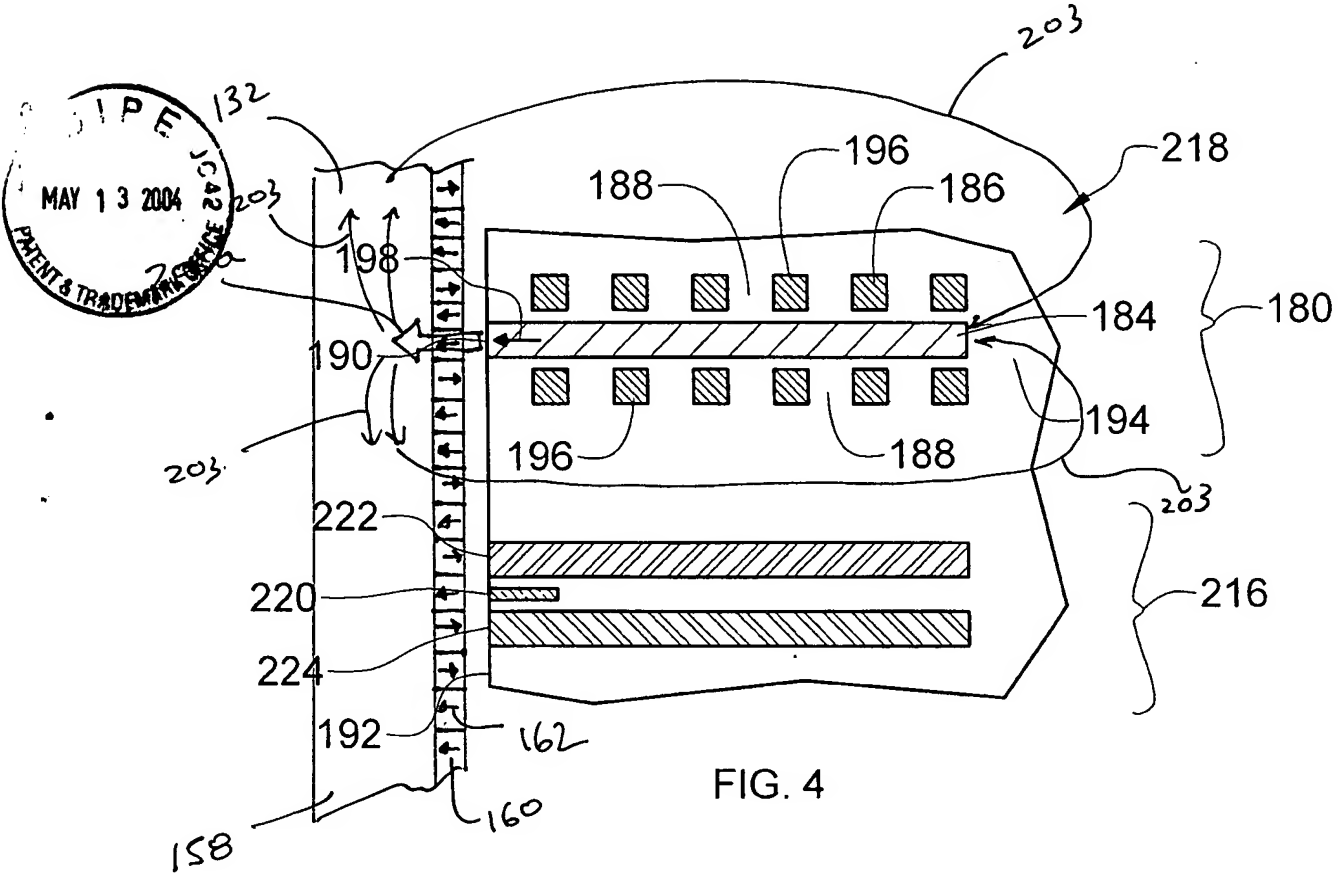

FIG. 4

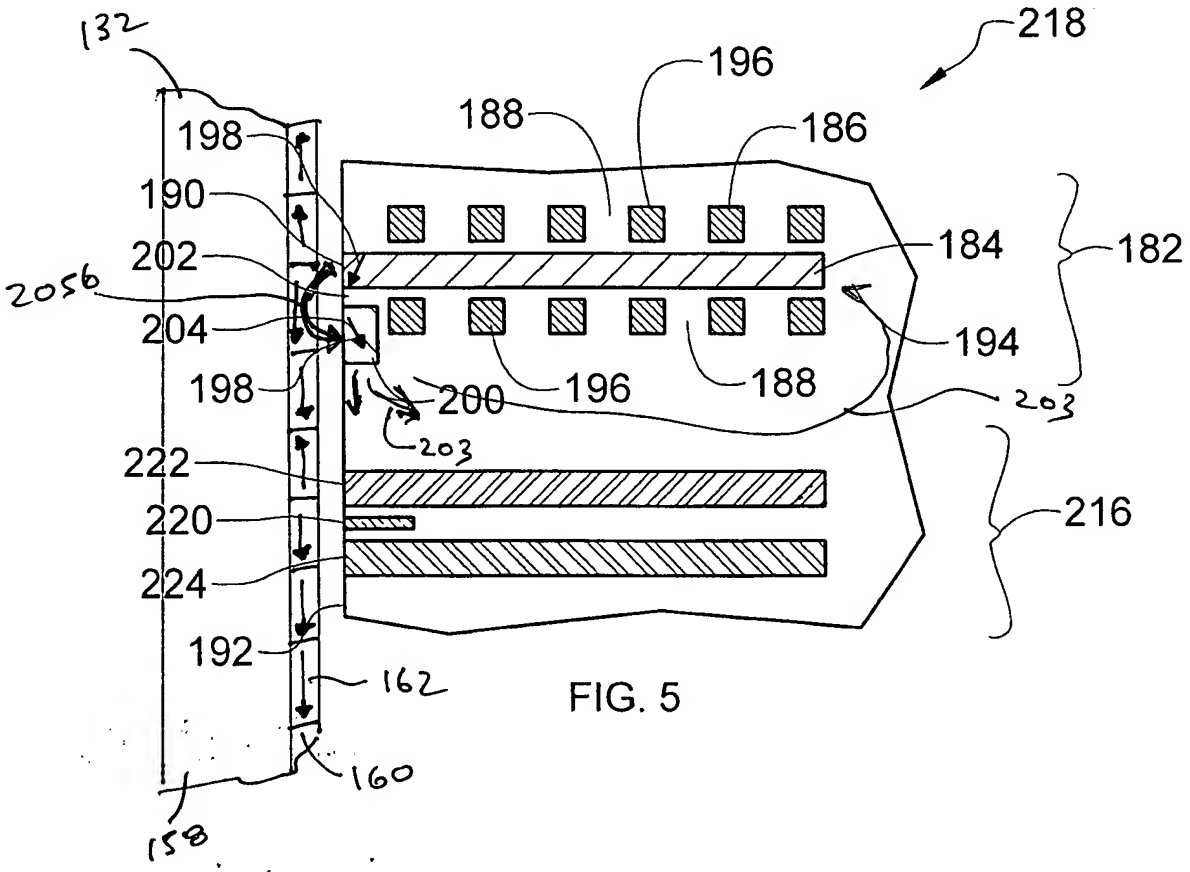

FIG. 5